



Kompetenceopbygning til bæredygtighed i FM

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Publication date:
2014

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Citation (APA):
Nielsen, S. B. (Author). (2014). Kompetenceopbygning til bæredygtighed i FM. Sound/Visual production (digital)

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Kompetence opbygning til bæredygtighed i FM

INNObyg

Susanne Balslev Nielsen

12 November 2014



Helhed og livsfaser...

Ide: Det starter med at nogen får en ide til en nyt byggeri, som er attraktivt, muligt og kan finansieres



Programmering: Derefter går man med en bygherrerådgiver igang med konkretisering af ønsker og krav...



Projektering: Bygværket tegnes og beskrives af arkitekt og rådgivende ingeniør



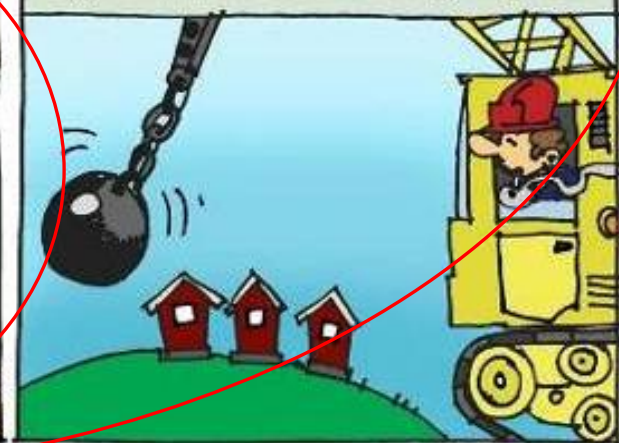
Opførelse: Entreprenøren og hans udførende opfører og afleverer bygværket



Brug og drift: Brugere tager bygværket i brug. Bygværket vedligeholdes og ombygges med tiden lidt eller meget...

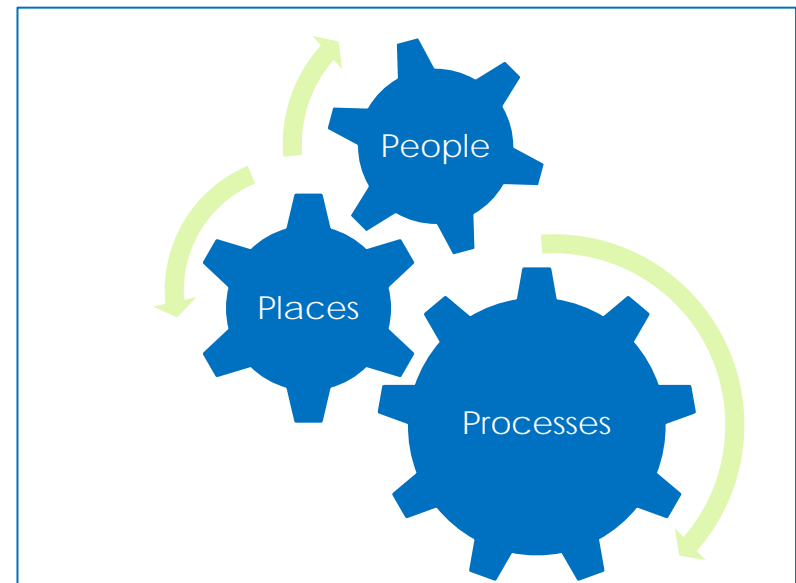


Nedrivning: Når det er udtjent fjernes bygværket.. Processen kan gentages.



Center for Facilities Management

- Åbning i 2008
- Realdania: 25 mio. DKK til
 - projekter
 - opbygning af nationalt forskningsnetværk
 - Ca 20 projekter og 6 Ph.D.
- Tæt dialog med FM branchen
 - privat + offentlig



*Forskning og
udvikling med
virkeligheden
som laboratorium*

Hvem er jeg?

FM:

- Siden 2004
- Vicecenterleder i Center for Facilities Management- Danmarks Tekniske Universitet, 2008-
- Professor II på HiOA, Norge, 2014-
- Speciale: bæredygtighed in FM, 1992-

Uddannelse:

- Civilingeniør 1993: bæredygtig byudvikling
- Ph.D. 1998: Transformation of technical infrastructure towards sustainable urban development

International profil:

- European FM-researcher of the year 2010
- EuroFM: Aktiv i RNG (research network group) og EuroFM konferencer siden 2008, Formand 2015-2016



Aktuelle projekter

- Sustainable Facilities Management
- Organisering af kommunale FM centre
- ESCO og andre energi service koncepter
- Climatilpasning og bygningsvedligeholdelse
- Shared space in the knowledge city

Program

1. Introduktion til bæredygtighed i FM
2. Eksempler på internationale kompetenceprofiler
Individuelt/teams/organisationer
3. Uddannelse til bæredygtighed i FM i DK:
et ubesvaret spørgsmål

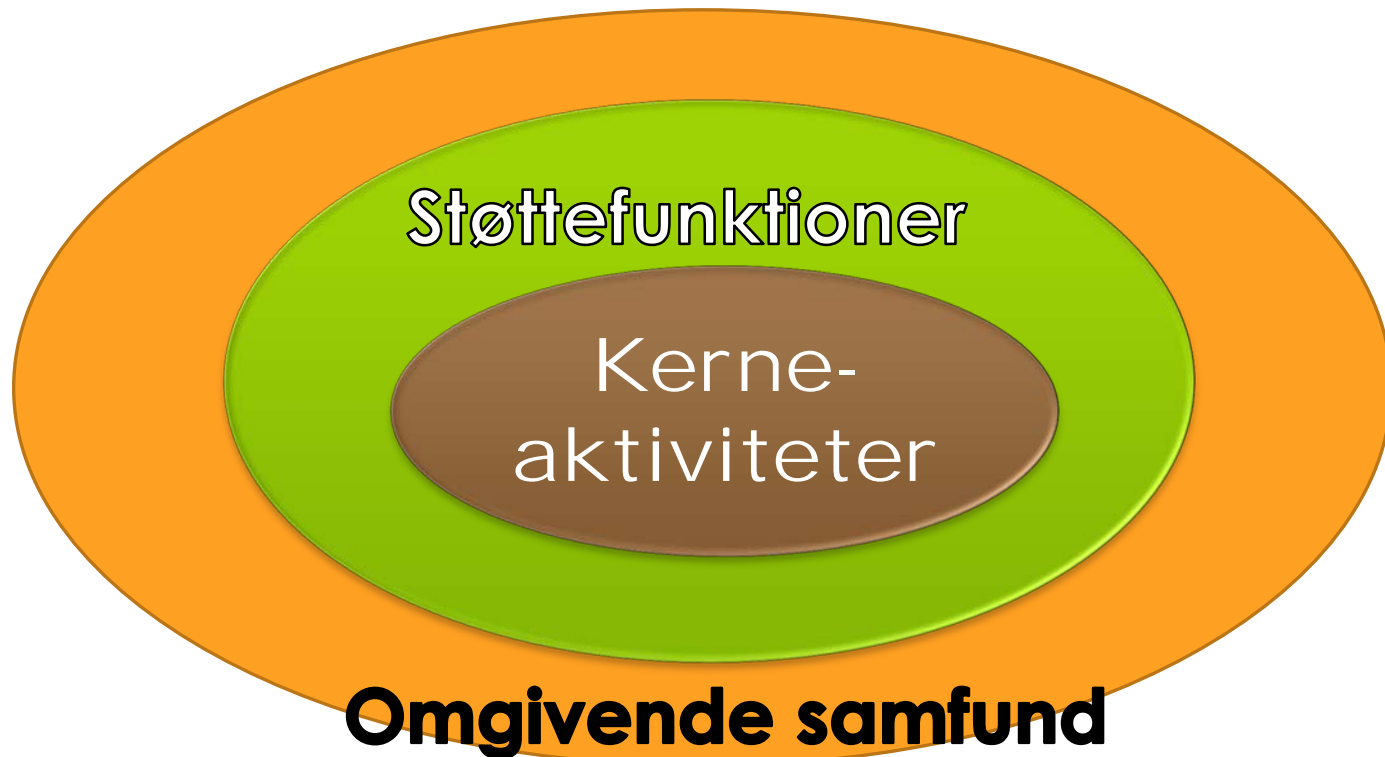


Introduktion til bæredygtighed i FM

Eksempler på faciliteter



- Facilities = Støttefunktioner som gør livet/aktiviteter lettere og mere "bekvemt"
- Management = koordinering og styring
- Facilities Management = Facility Management=FM

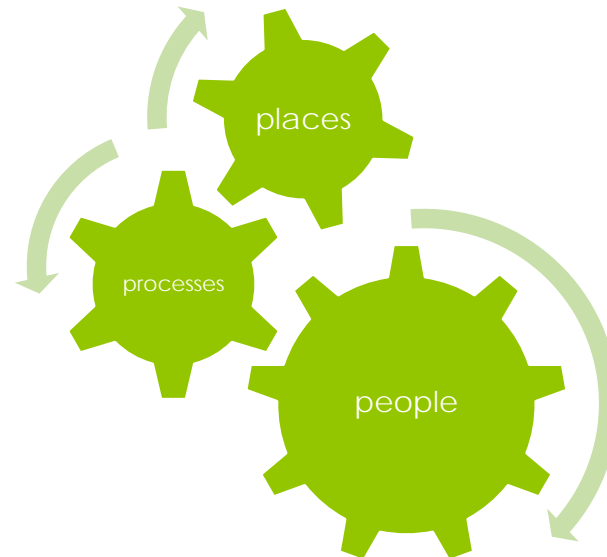


Bæredygtig facilities management - et fagområde i udvikling

Økologi: Viden om samspillet mellem alt levende og dets omgivelser.


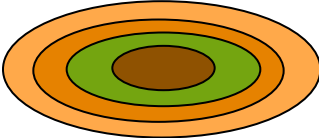
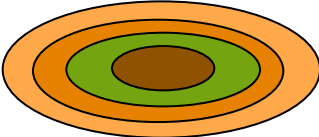
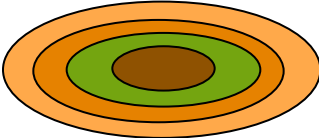
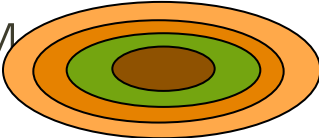



FM: Viden om samspillet mellem "people, places, processes".



Hvis vi ikke forstår disse sammenhænge, vil vi heller ikke kunne forstå hvorfor det er vigtigt, at FM bidrager til lokal og global bæredygtighed: socialt, miljømæssigt og økonomisk.

Facilities Management og bæredygtighed - tendenser og key performance indicators

- **Facilities Management (FM)**  Tilfredshed, økonomi
- **Bæredygtig/sustainable FM:**  + Miljø, socialt, økonomisk
- **Miljøvenlig FM:**  + Energi, vand, affald
- **Energirigtig FM**  + KWh
- **Klimavenlig/klimatilpasset FM**  + CO₂ / + regnvand
- **CSR** corporate social responsibility  + lokalsamfund,
fair trade mm.

FM opgaver

Investeringsforvaltning

- Målsætning
 - Eje/leje
 - Forrentning
- Strategier
 - Markedsst.
 - Økonomisk st.
 - Juridisk st.
 - Teknisk st.
 - Miljøst.
- Køb og salg
- Nybygning/modernisering/nedrivning

Finansiell/administrativ forvaltning

- Finansiering
- Budgetter
- Regnskaber
- Skatter
- Erfar tal/Bench
- Forsikring
- Kontrakter
 - Ekstern/Intern
- Ind-/udlejning

Arealforvaltning

- Space management
- Areal udnyttelse
- Indretninger
 - Lokaler
 - Arbejdsplads
- Flytninger
- Inventar

Driftsforvaltning

- Vedligehold
 - Terræn
 - Bygning udv.
 - Bygning indv.
 - Bygningsinst.
 - Inventar
- Forsyning
 - Varme
 - El
 - Vand
 - Afløb
 - Renovation
- Renhold
 - Udv. Terræn
 - Udv. Bygning
 - Indvendig
 - Vinduespolering
- Fælles drift
 - Driftspersonale
 - Materialer, værktøj, maskiner
 - Service – ekstern hjælp
 - Eksterne konsulentvirksomhed
- Miljø

Serviceforvaltning

- Projekter/enterprise
- EDB
 - Datanet
 - Telefon
 - IT-Værktøjer
 - Internet
- Sikkerhed & vagt
- Arbejdsmiljø
- Kantine
- Reception
- Intern post
- Kontorservice

En vision for bæredygtighed i FM

Bæredygtig FM er FM som samtidig

- Gør noget godt og nødvendigt for mennesker og andet liv som er i nærkontakt med faciliteter og services
- Producerer faciliteter og services med mindst mulig belastning for lokal og global natur
- Bidrager til den langsigtede samfundsomstilling

Mod en nordisk model for bæredygtig FM

- Tilgang: Holistisk bæredygtighedsforståelse og systemisk forandringsledelse
- Ledelsesparadigmer: en tilpasset kombination af værktøjer (hovedgrupper: bureaukrati, new public management og relativt paradigme)
- Fokus på kompetenceopbygning, forandringsledelse og lærende organisationer





Eksempler på internationale kompetence-profiler

1. IFMA: 11 kompetencer
 2. BIFM: kompetencematrix
 3. SFM håndbøger
 4. CFM forskningsprojekter
-



IFMA: 11 Competences

1. Communication
2. Emergency Preparedness and Business Continuity
3. Sustainability
4. Finance & Business
5. Human Factors
6. Leadership and Strategy
7. Operations and Maintenance
8. Project Management
9. Quality
10. Real Estate and Property Management
11. Technology

See more at: <http://www.ifma.org/know-base/fm-knowledge-base/knowledge-base-details/11-core-competencies-of-facility-managers#sthash.IRv4F89k.dpuf>

BIFM - kompetencer

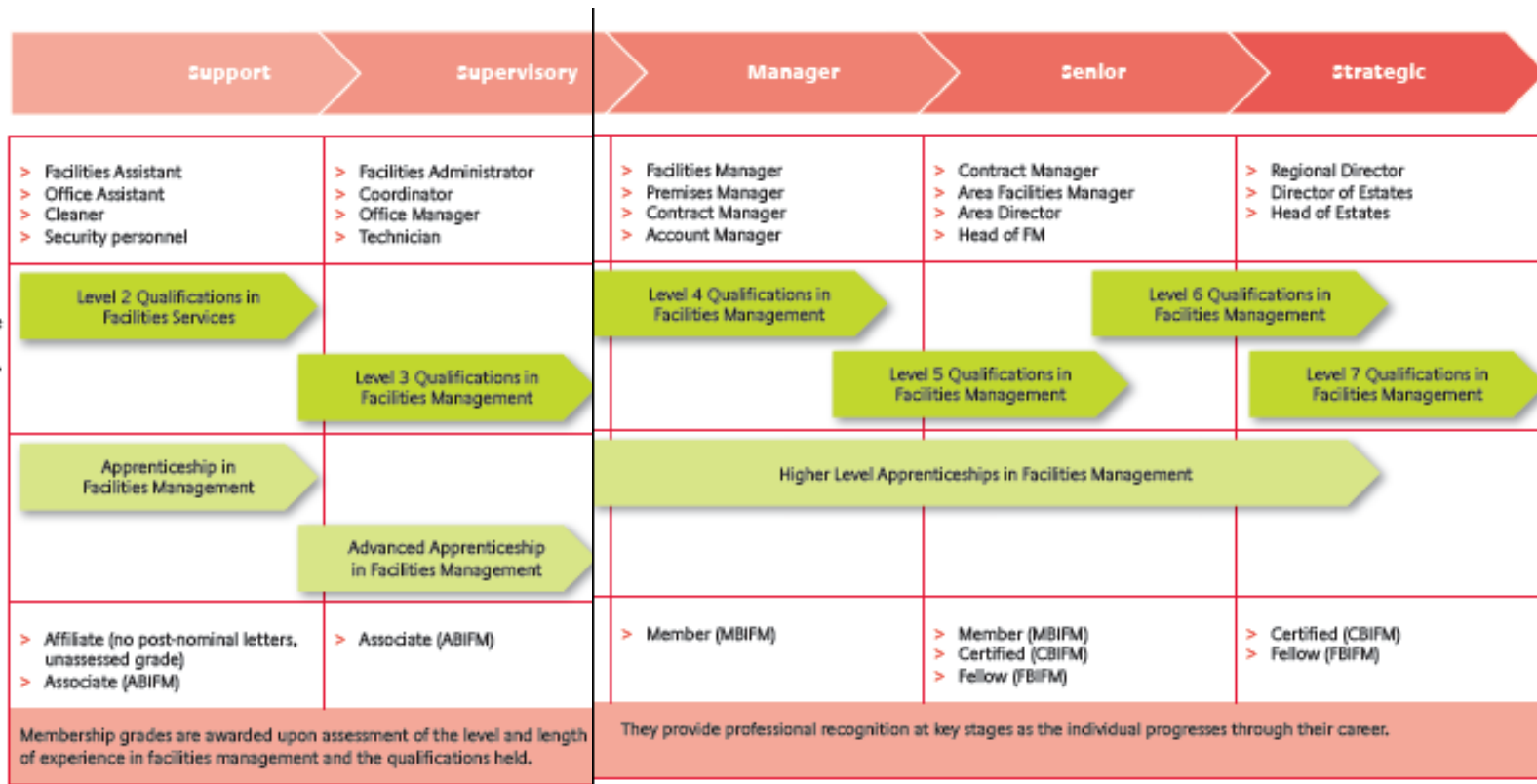
The FM Professional Standards framework is the supporting structure that clearly defines:

- **the key functions** (the functional areas) performed by FM practitioners,
- the **main components of each functional area** (functional area component),
- and the **competences that are required to be a competent professional when carrying out each function.**

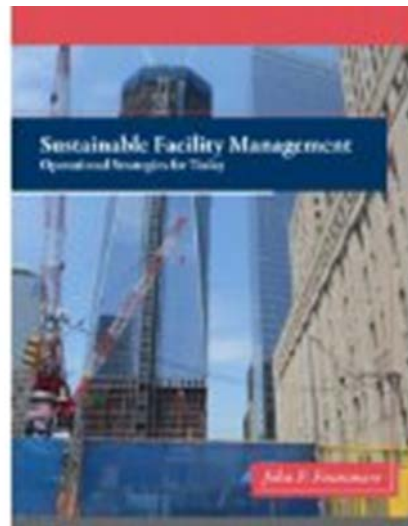
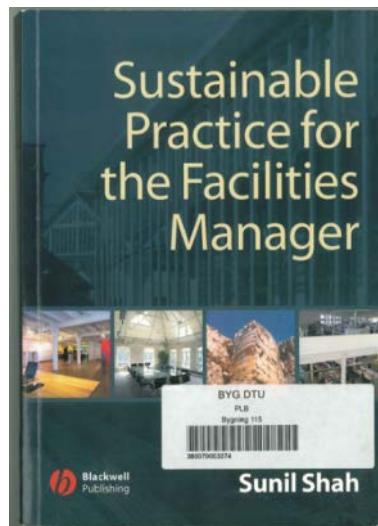
The framework includes high-level competences defined for each facilities management career level, from a support role through to a strategic role.

| Functional areas | | The role of facilities management | | Strategy and policy development | | | Leadership and management | | | Business continuity and compliance | | Business support services management | |
|------------------|-----------|---|--|---|---|---|---|---|--|--|---|--|--|
| Descriptors | | Manages facilities management knowledge to add value to an organisation | | Develops facilities management strategy and policy | | | Develops and manages a highly motivated and skilled facilities management workforce in a dynamic environment | | | Builds business resilience and contains business risk | | Delivers and innovates facilities management service solutions aligned with business objectives | |
| Components | | Sector knowledge | Information and knowledge management | Facilities management strategy | Corporate social responsibility | Facilities management policy | Project management | People management | Change management | Risk management | Compliance | Service innovation | Managing service delivery |
| Strategic | Strategic | Influences and promotes facilities management within and beyond the sector both nationally and internationally | Develops knowledge management strategies and systems to support an organisation's strategic facilities management vision | Leads the development of a facilities management strategy that enables a business to achieve its overall strategic objectives | Influences the development of a corporate social responsibility and sustainability strategy | Evaluates the coherence and fitness for purpose of facilities management policies to deliver the strategy and meet legislative requirements | Directs and sponsors multiple facilities management projects, managing project relationships, interdependencies and risks | Provides strategic motivational leadership to people development and influence corporate culture, values and behaviour | Promotes the vision and leads strategic change and manages the impact on facilities management | Develops and evaluates the effectiveness of a facilities management risk strategy in context of an organisation's risk profile | Develops and evaluates the effectiveness of facilities management policies to meet corporate governance obligations to comply with all legislative, statutory and regulatory requirements | Forecasts trends and facilities management market opportunities, encouraging creativity and embedding innovation within service provision | Develops facilities management service delivery strategy and evaluates the effectiveness of alternative models and their resource implications |
| | | Understands the changing role, scope and impact of facilities management and influences developments and trends | Manages the use of information and implements information systems to improve business performance | Establishes processes and procedures that enable the implementation of a facilities management strategy | Analyses the scope and impact of corporate social responsibility and sustainability, developing policies that optimise business opportunities | Develops, manages and reviews facilities management policies | Defines and plans facilities management projects, building project teams and controlling project delivery to budget | Plans and motivates the facilities management workforce to meet organisational objectives and encourage innovation | Plans organisational change, ensuring the continuing coherence of facilities management policies and processes | Develops facilities management risk monitoring systems and processes | Develops and reviews facilities management processes and procedures that meet compliance requirements | Identifies and exploits value-creating opportunities for innovation in facilities management products and services | Creates an operational plan to manage the delivery of a portfolio of facilities management services |
| Management | Senior | Promotes the role, diversity and contribution of facilities management in the wider environment | Analyses and interprets information to make business decisions | Implements and evaluates a facilities management strategy, recommending adaptations to meet changing circumstances | Optimises opportunities to promote and integrate sustainable and socially responsible facilities management activities into business practice | Implements facilities management policies and procedures | Manages the delivery of facilities management projects to plans and targets and reports on progress and performance | Resources, develops and motivates facilities management teams to achieve objectives that contribute to the delivery of an organisation's strategy | Manages the implementation of change plans, supporting and influencing others to accept change positively | Implements processes and monitors risk in compliance with an organisation's risk strategy | Manages the implementation of facilities management policies and procedures that meet compliance requirements | Identifies ways of adding value to existing and planned facilities management services and promotes services to existing and potential clients | Manages and reviews the delivery of a range of facilities management services |
| | | Understands the role and | Uses information to support facilities | Monitors operational | Complies with corporate social | Contributes to the implementation | Contributes to the delivery | Supervises and develops facilities | Monitors the impact of the | Monitors and reports on | Ensures that all operational tasks | Collects ideas and customer feedback | Supervises the delivery of |

Karriereniveauer



How to (ifølge Shah og Fennimore m.fl.)



Service design; nøgletal og datahåndtering;
vidensledelse, grønne regnskaber, commissioning etc.



"Sustainability is a quest#
rather than an absolute.

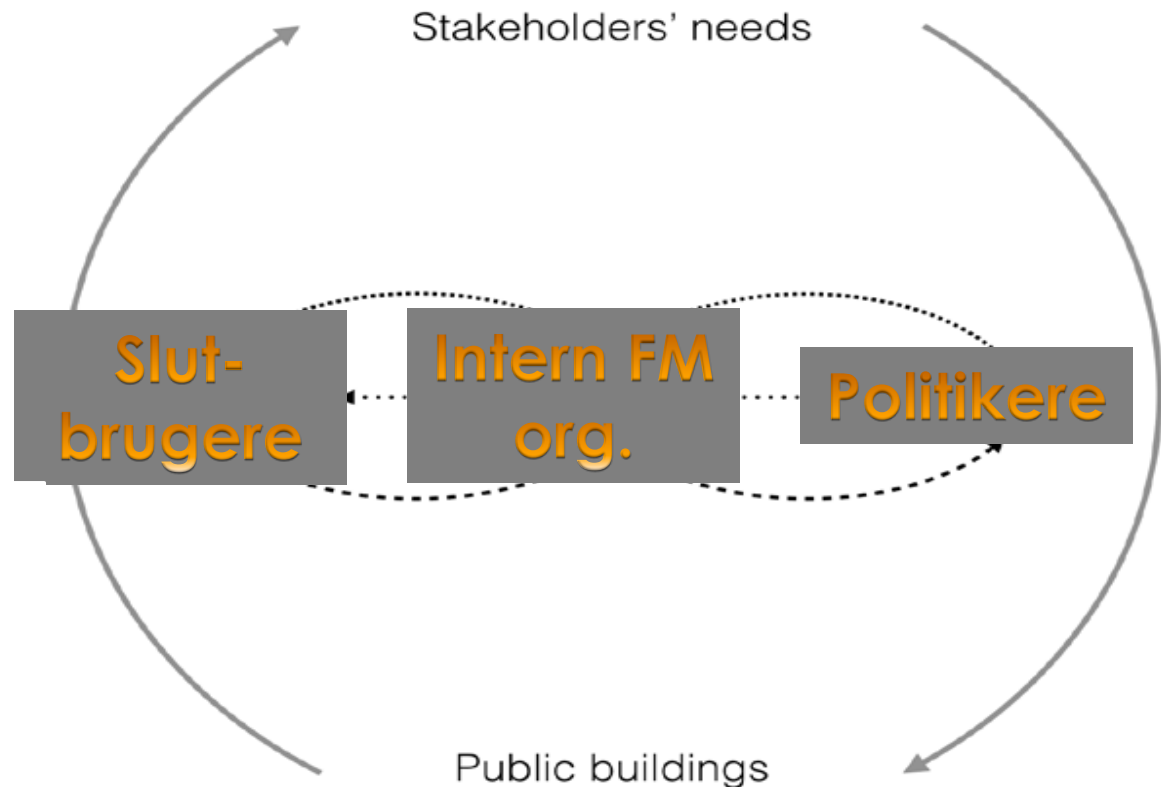
Is a goal that we,
as facility managers,
should be striving toward for the good
of the planet"

John P. Fennimore 2013

a journey towards a goal

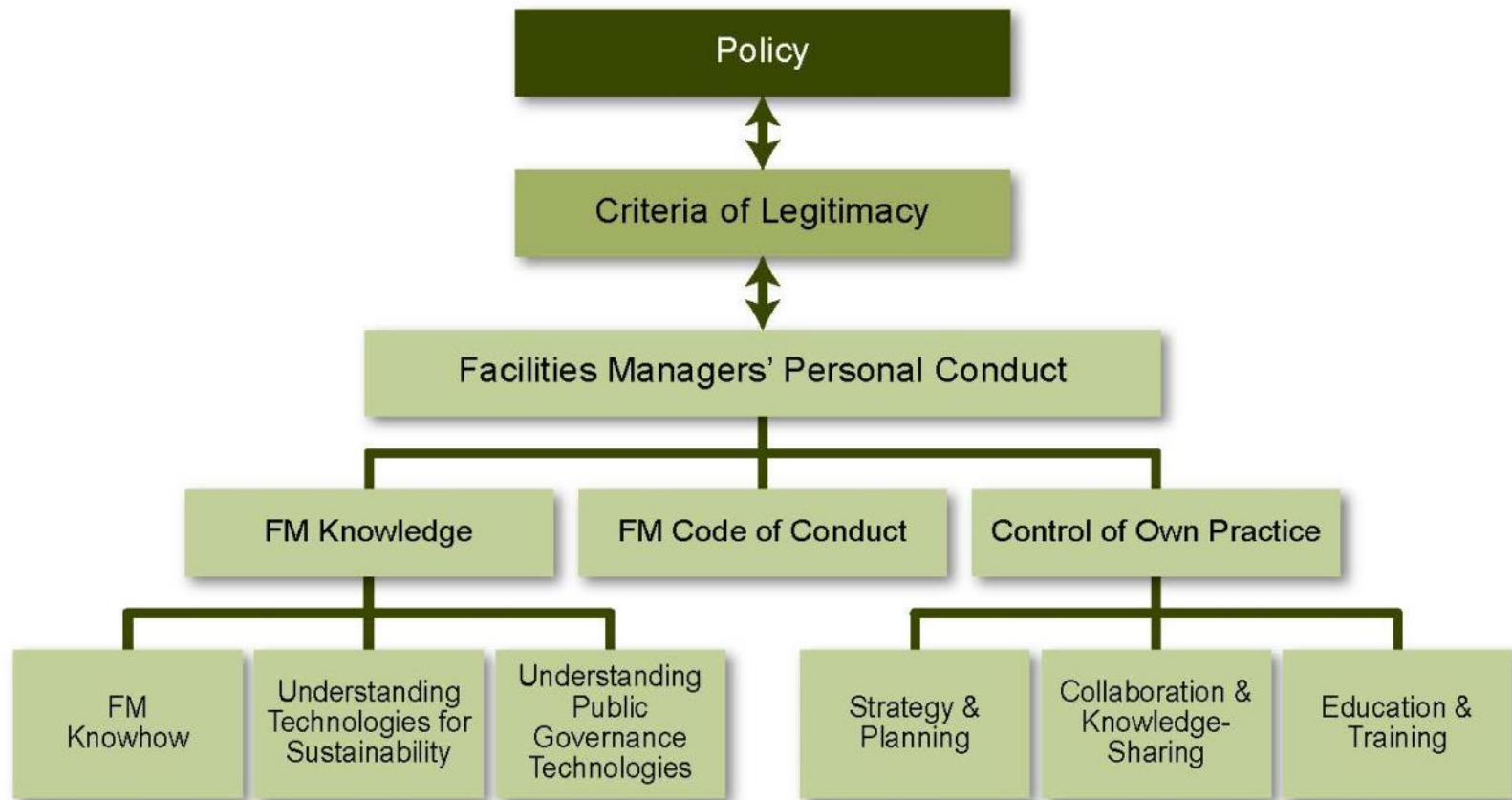
Kompetencer til energieffektivitet i kommunale bygninger

3 roller:
Oversætter
Demonstrator
Processor



Nardelli; Jensen and Nielsen (submitted): Facilities Management in public-private collaborations: Danish ESCO projects. Journal of Facilities Management.

Kompetencer til bæredygtig FM i offentlige organisationer



Andre eksempler på erfarede snublesten og dilemmaer

- Hvem skal vi mest tage hensyn til, nære eller fjernere medborgere?
- Hvornår er det rigtigst at handle?
- Hvad er mest bæredygtigt? Nu og på længere sigt....
-
-





Uddannelse til bæredygtighed i FM i DK

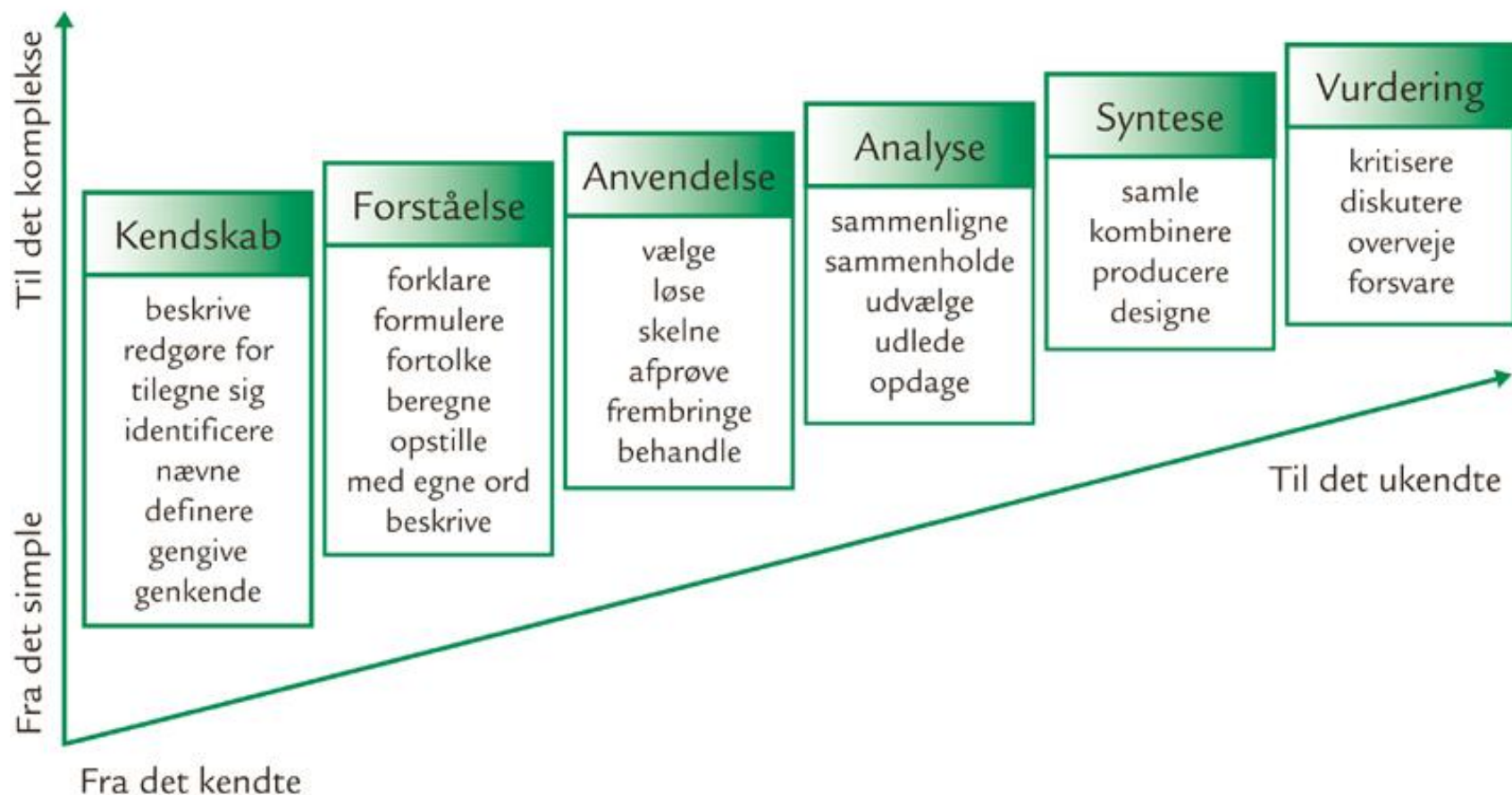
- Ungdomsuddannelser
- Efteruddannelser
- Lærende organisationer

Til hvilket job?

- Byggeledelse
- Teknisk service leder
- Ejendomsforvaltning
- Serviceleverandør
- Produktudvikler
- M.fl



SFM Læringsmål – Blooms Taksometri



Pointer:

1. Bæredygtighed i FM som strategisk ledelsesdisciplin i komplekse og dynamiske systemer
2. Bæredygtig FM er bredt og en paraply for mange specialiserede FM udfordringer på strategisk, taktisk og operationelt niveau.
3. Eksempler på kompetenceprofiler til inspiration og uddannelsesplanlægning

Forskning og udvikling med virkeligheden som laboratorium.....

Mere information: www.CFM.DTU.DK

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Realdania Research](#)

